SUBCHAPTER A: GENERAL PROVISIONS

§285.1. Purpose.

It is the policy of the commission to assist the state's citizens in obtaining safe and adequate on-site sewage facilities (OSSFs); to minimize the exposure of Texas citizens to the disease transmission potential of human and domestic waste; to minimize the contamination of drinking water supplies and hazards to the state's recreational areas; and to reduce the potential for surface and groundwater pollution. It is further the policy of the commission to promote regulation of OSSFs by local governmental entities and to eliminate and prevent health hazards through the regulation and the proper planning of the location, design, construction, installation, alteration, extension, repair, operation, and maintenance of OSSFs.

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§285.2. Definitions.

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise:

Abandoned tank - A tank that is not to be used or is not allowed to be used by a permitting authority.

Aerobic digestion - The bacterial decomposition and stabilization of sewage in the presence of free oxygen.

Anaerobic digestion - The bacterial decomposition and stabilization of sewage in the absence of free oxygen.

Apprentice - An individual who has been properly registered with the agency, and is undertaking a training program under the supervision of an installer (holding a valid certificate under this chapter) who has agreed to accept responsibility for the individual.

Authorized agent - A local governmental entity authorized by the commission, executive director or Chapter 284 of this title (relating to Private Sewage Facilities) to implement and enforce Chapter 366, Texas Health and Safety Code.

Bedrock - A continuous horizontal layer of hardened mineral deposits that do not support growth of common plant life.

Blackwater - All sewage other than greywater that contains sufficient human or animal wastes to require the water to be treated prior to disposal to the earth's surface or subsurface.

Borehole - A drilled hole four feet or greater in depth and one to three feet in diameter.

Certificate or certification - The actual certificate of registration held by an individual required to obtain such under this chapter or the process of obtaining a certificate of registration from the agency.

Cesspool - A non-watertight, covered receptacle intended for the receipt and partial treatment of domestic sewage. This device is constructed such that its sidewalls and bottom are open-jointed to allow the gradual discharge of liquids while retaining the solids for anaerobic decomposition.

Chemical - A substance that in sufficient quantity could have a biotoxic effect on OSSFs.

Cluster system - an on-site sewage collection, treatment, and disposal system designed to serve two or more sewage-generating units on separate legal tracts where the total combined flow from all units does not exceed 5,000 gallons per day.

Composting toilet - A self-contained treatment and disposal facility constructed to decompose non-waterborne human wastes through bacterial action facilitated by aeration.

Condensate drain - Collection and disposal of water generated by air conditioners, refrigeration equipment, and other equipment.

Delegation - To delegate or designate.

Designated representative - An individual who holds a valid certificate with the agency and is designated by the authorized agent to make site evaluations, percolation tests, system evaluations, and inspections subject to the authorized agent's approval.

Direct supervision - The responsibility of an installer to perform the oversight, direction and approval of all actions of an apprentice related to the installation of an OSSF.

Edwards Aquifer - That portion of an arcuate belt of porous, waterbearing limestones composed of the Comanche Peak, Edwards, and Georgetown formations trending from west to east to northeast through Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties or as amended under Chapter 213 of this title (relating to Edwards Aquifer).

Edwards Aquifer Recharge zone - Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, and including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is specifically that geological area delineated on official maps located in the Austin and San Antonio Regional Offices of the agency, or as amended by Chapter 213 of this title (relating to Edwards Aquifer).

Emergency repair - A repair made to an OSSF to abate a serious and dangerous nuisance condition without altering the OSSF's planned function and notification is given to the permitting authority within 72 hours of when the repairs begin.

Evapotranspiration (ET) system - A subsurface sewage disposal facility which relies on soil capillarity and plant uptake to dispose of treated effluent through surface evaporation and plant transpiration.

Floodplain (100-year) - That area along a watercourse during the time the watercourse is subject to the statistical 100-year flood.

Floodway - The channel of a watercourse and adjacent land areas (center portion of the 100-year floodplain) that must be reserved in order to discharge the 100-year flood without cumulatively increasing the water surface more than one foot above the 100-year flood elevation prior to encroachment into the 100-year floodplain.

Geotextile filter fabric - A non-woven fabric suitable for wastewater applications.

Gravel-less drainfield pipe - A generically labeled large diameter (usually eight or ten inches) geotextile fabric-wrapped piping product which is intended for use without gravel in a subsurface disposal facility.

Grease interceptor - Floatation chambers where grease floats to the water surface and is retained while the clearer water underneath is discharged. There are no moving mechanical parts and its operational characteristics are similar to a septic tank.

Greywater - Wastewater from clothes washing machines, showers, bathtubs, handwashing lavatories, and sinks not used for the disposal of hazardous or toxic ingredients or waste from food preparations.

Groundwater - Subsurface water that occurs beneath the water table in soils and geologic formations that are fully saturated either year-round or on a seasonal or intermittent basis.

Hardness (water) - Primarily the presence in water of calcium bicarbonate, magnesium bicarbonate, calcium sulfate (gypsum), magnesium sulfate (epsom salts), calcium chloride, and magnesium chloride in solution.

Holding tank - A watertight container equipped with a high-level alarm used to receive and store sewage pending its delivery to, and treatment at, an approved treatment facility. This type of facility is generally intended for interim use, if and when approved by the permitting authority.

Individual - A single living human being.

Installer - An individual who holds a valid certificate with the agency and is compensated by another to perform services, construct, install, alter, or repair an OSSF.

Local governmental entity - A municipality, county, river authority, or special district, including an undergroundwater district or soil and water conservation district.

Maintenance - The normal or routine upkeep, cleaning, or mechanical adjustments to an OSSF.

Maintenance company - A person in the business of maintaining OSSFs. At least one individual in the company must hold an Installer II certificate or a Class D or higher wastewater operator certificate and be certified by the appropriate manufacturer's maintenance program for the proprietary unit being maintained.

Maintenance findings - The results of a required performance check or component inspection on a specific OSSF by a valid maintenance company as outlined in the maintenance contract.

Manufactured housing community - Any facility or area developed for lease or rental of space for the placement of two or more mobile homes.

Mound system - A soil absorption disposal system which is installed above the natural grade and in or below an artificially created mound of earth.

Multi-unit residential development- a building, structure or combination of structures which have been designed to contain units in which more than two families may reside.

NSF International - National Sanitation Foundation International testing laboratories located in Ann Arbor, Michigan.

Natural soil - Earthen materials deposited into place by natural processes and not disturbed by artificial processes.

Non-standard disposal - All on-site disposal systems, components and materials not described in this chapter as standard and not marketed for sale in the state as a proprietary item.

Non-standard treatment - All on-site sewage treatment processes not described in this chapter as "standard" or "proprietary" treatment processes.

Nuisance -

- (A) sewage, human excreta, or other organic waste discharged or exposed in a manner that makes it a potential instrument or medium in the transmission of disease to or between persons; or
- (B) an overflowing septic tank or similar device, including surface discharge from or groundwater contamination by a component of an OSSF, or a blatant discharge from an OSSF.

On-site sewage disposal system - One or more systems of treatment devices and disposal facilities that:

(A) produce not more than 5,000 gallons of waste each day; and

(B) are used only for disposal of sewage produced on the site (including cluster systems) where the system is located.

On-site sewage facility (OSSF) - An on-site sewage disposal system.

On-site waste disposal order - An order adopted by local governmental entity and approved by the executive director. Approval of this order by the executive director grants authorized agent status to the local governmental entity.

Owner - A person who owns an OSSF.

Permit - An authorization, issued by the permitting authority, to install, construct, alter, extend, repair, or operate an OSSF. The permit consists of the authorization to construct (including the approved planning materials) and the license to operate.

Permitting authority - The executive director or an authorized agent.

Planning material - Plans and other supporting materials submitted to the permitting authority for the purpose of obtaining a permit to construct and operate an OSSF.

Platted - Subdivided property recorded with the county/city in an official plat record.

Pretreatment tank - A tank placed ahead of a treatment unit that functions as an interceptor for material such as plastics, clothing, hair, and grease that are potentially harmful to treatment unit components.

Probation - A formal procedure in which an individual or authorized agent is subject to an evaluation for a trial period to ascertain whether an individual should retain possession of a registration or certification as issued by the executive director or an authorized agent should retain delegation as an authorized agent.

Proprietary system - An OSSF in which all or part of the treatment or disposal process is owned by a person and has a registered trademark or patent or utilizes a tradename or trademark.

Regional office - A regional office of the Texas Natural Resource Conservation Commission.

Restrictive horizon - A layer of the soil profile with a significant observable change in density, clay content, or particle size which restricts the vertical movement of water.

Revocation - A formal procedure initiated by the executive director in which an authorized agent's delegation or an installer's, site evaluator's, or designated representative's registration or certification is rescinded by the commission.

Scum - A mass of organic and/or inorganic matter which floats on the surface of sewage.

Secondary Treatment- the reduction of pollutants to the levels specified in §309.1 of this title (relating to Domestic Wastewater Effluent Limitation and Plant Siting).

Seepage pit - An unlined covered excavation in the ground which operates in essentially the same manner as a cesspool.

Septic tank - A watertight covered receptacle constructed to receive, store, and provide treatment to domestic sewage. Its function is to separate solids from the liquid, digest organic matter under anaerobic conditions, store the digested solids through a period of detention, and allow the clarified liquid to be disposed of by an approved method in accordance with this chapter.

Sewage - waste that:

- (A) is primarily organic and biodegradable or decomposable; and
- (B) generally originates as human, animal, or plant waste from certain activities, including the use of toilet facilities, washing, bathing, and preparing food.

Sewage disposal plan - A technical report prepared by either a registered professional engineer or registered sanitarian, having demonstrated expertise in on-site sewage disposal planning. The plan must include, but is not limited to, the location of structures, easements, wells, treatment units and disposal areas.

Single family dwelling - A habitable structure constructed on, or brought to its site, and occupied by members of one family.

Site evaluator - An individual who holds a valid certificate with the agency and visits a site and conducts a pre-construction site evaluation which includes performing soil analysis, a site survey, and other criteria necessary to determine the suitability of a site for a specific OSSF.

Sludge - A semi-liquid mass of partially decomposed organic and inorganic matter which settles at or near the bottom of a receptacle containing sewage.

Soil - The unconsolidated mineral material on the surface of the earth that serves as a natural medium for the growth of plants.

Soil absorption system - A subsurface method for the disposal of partially treated sewage which relies on the soil's ability to absorb moisture and allow its dispersal by lateral and vertical movement through and between individual soil particles.

Subsurface sewage facility - A system which treats sewage and distributes the pretreated sewage effluent into a below ground level disposal area.

Subdivision- a division of a tract of property into two or more parts either by platting or field notes with metes and bounds, and transferred by deed or contract for deed.

Uniform gravel size - Gravel to be used in standard absorption drainfields that has been processed through shaker screens to produce a size passing one size screen and retained on another. The smaller screen shall be at least 50% of the size of the larger screen.

Water softening - the removal of minerals causing hardness from water.

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§285.3. General Requirements.

- (a) Applicability.
- (1) All aspects of the planning, installation, construction, alteration, extension, repair, operation, and maintenance of OSSFs must be in accordance with this chapter or in accordance with an order/ordinance or other published criteria of an authorized agent which has received the executive director's written approval.
- (2) In the case of OSSFs proposed for installation, construction, alteration, extension, repair, operation, and maintenance in areas of the state void of an authorized agent, the executive director will be the permitting authority in accordance with this chapter.
- (b) Unauthorized systems. Boreholes, cesspools, and seepage pits shall not be authorized for installation and use in Texas.
- (c) Variances. Requests for variances from provisions of this chapter may be considered by the appropriate permitting authority on an individual basis. The variance request must demonstrate to the satisfaction of the permitting authority that the variance has been requested because conditions are such that the equivalent protection of the public health and the environment can be provided by alternate means. Any request for a variance under this subsection must contain planning materials prepared and sealed by either a registered sanitarian or a registered professional engineer.
- (d) Exclusions. The following are exclusions from provisions of this chapter and must be permitted under Chapter 26, Texas Water Code, and Chapter 305 of this title (relating to Consolidated Permits):
- (1) One or more systems of treatment devices and disposal facilities that cumulatively produce more than 5,000 gallons of sewage per day on one piece of property;
- (2) Any system that produces waste that is either non-domestic municipal, recreational, agricultural, industrial, or other as defined in Chapter 26, Texas Water Code; and
- (3) Any system that will have surface discharges into waters in the state or discharges adjacent to waters in the state.

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(a) Land planning and site evaluation. Land developments and land subdivided for building construction which will utilize OSSFs for sewage disposal shall be evaluated for overall site suitability and this submittal shall be reviewed and approved by the permitting authority prior to approval being granted for subdivision of the property. The following items shall be evaluated:

(1) Residential lot sizing.

- (A) General considerations. The failure of an OSSF may be caused by a large number of circumstances, including inadequate soil percolation, improper construction, planning, installation, and misuse. The single most important factor concerning public health problems resulting from these failures is the residential dwelling density which is primarily a function of lot size. The failure of an OSSF in a highly populated area is the fundamental cause of public health hazards resulting from on-site sewage disposal. Failure of an OSSF provides a medium for the transmission of disease and the fact that many people are in the vicinity causes concern over the spreading of disease. OSSFs using soil absorption for effluent disposal are more likely to malfunction in high population density situations because the soil available to absorb or evaporate the effluent is limited. The failure of an absorption system on a small lot can be financially disastrous to the owner because the lot may not contain sufficient room to construct a new absorption field in a new location.
- (B) Platted or unplatted subdivisions served by a public water supply. Subdivisions of single family dwellings platted or created after January 1, 1988, and served by a public water supply but utilizing individual OSSF methods for sewage disposal, shall provide for individual lots having surface areas of at least ½ acre, or shall have site-specific sewage disposal plan submitted by a registered professional engineer or registered sanitarian and approved by the permitting authority. The location of an OSSF under this paragraph shall be in accordance with §285.91(10) of this title (relating to Tables). In no instance shall the area available for such systems be less than two times the design area.
- (C) Platted or unplatted subdivisions served by individual water systems. In subdivisions platted or created after January 1, 1988, for single family dwellings where each lot maintains an individual water supply well and an OSSF, the sewage disposal plan shall show the approved well location and a sanitary control easement around the well within a 100-foot radius in which no subsurface sewage system may be constructed. A watertight sewage unit or lined evapotranspiration bed with leak detection capability may be placed closer to the water well than 100 feet, provided the permitting authority has granted a variance. To minimize the possibility of the transmission of waterborne diseases due to the pollution of the water supplied for domestic use, each lot in a subdivision shall contain no less area than one acre, or shall have site-specific planning materials prepared by a registered professional engineer or a registered sanitarian and approved by the permitting authority. In no instance shall the area available for such systems be less than two times the design area.
- (2) Manufactured housing communities or multi-unit residential developments served by a central sewage collection system for on-site disposal. Manufactured housing communities or multi-unit residential developments which are owned and controlled by a person which rents or leases space may utilize smaller lots than stated in paragraph (1)(A) and (1)(B) of this subsection provided a sewage disposal plan addressing replacement area is submitted to the permitting authority and approved. Developments of this type which connect living units to a sewage collection system for on-site disposal, must provide planning materials for the system prepared by a registered professional engineer or registered sanitarian. The total

anticipated sewage production for such property shall not exceed 5,000 gallons per day from the connected homes and the OSSF must conform to the definition of OSSFs in §285.2 of this title (relating to Definitions).

- (3) Site evaluation. The subdivided property must be evaluated for soil suitability in accordance with §285.30 of this title (relating to Site Evaluation).
- (b) Approval of existing small lots or tracts. Existing small lots or tracts, subdivided prior to January 1, 1988, and not conforming to the minimum lot size requirements, may be approved for an OSSF provided the following conditions are met:
- (1) Minimum separation distances in §285.31 of this title (relating to Separation/ Setback Requirements) are maintained; and
- (2) The site has been evaluated by the site evaluator in accordance with §285.30 of this title (relating to Site Evaluation).
- (c) Review of subdivision or development plans. Persons proposing residential subdivisions, manufactured housing communities, multi-unit residential developments, business parks, or other similar uses and utilizing OSSFs for sewage disposal must submit planning materials for these developments to the permitting authority. The planning materials must include an overall site plan, topographic map, 100-year floodplain map, soil survey, location of water wells, and complete report detailing the types of OSSFs to be considered and their compatibility with area wide drainage and groundwater. A comprehensive drainage and 100-year floodplain impact plan must also be included in these planning materials. Planning materials shall also address potential replacement areas. A response to the submitted planning material from the permitting authority will be provided within 45 days of receipt.

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§285.5. Submittal Requirements for Planning Materials.

Planning materials required under this chapter shall be submitted to the permitting authority for review and approval in accordance with this section. All planning materials shall be in compliance with the provisions of this chapter and shall be submitted in accordance with of §285.91 (9) of this title (relating to Tables).

- (1) Submittal of planning materials by an owner or installer. For OSSFs not requiring planning materials to be submitted in accordance with paragraphs (2) and (3) of this section, an owner or installer must submit the appropriate planning materials for the proposed OSSF.
- (2) Submittal of planning materials by a registered professional engineer or registered sanitarian. OSSF planning materials shall be prepared and submitted by a registered professional engineer or registered sanitarian (with appropriate seal, date and signature) as follows:
- (A) proposals for treatment and/or disposal that are not standard as described in Subchapter D of this chapter (relating to Planning, Construction, and Installation Standards for OSSF Systems);

- (B) any OSSF proposed to serve manufactured housing communities, recreational vehicle parks, multi-unit residential developments which are owned or controlled by a person who rents or leases such space.
- (C) any OSSF for a structure not exempted by §20 of the Texas Engineering Practice Act shall have planning materials submitted by a registered professional engineer.
- (D) all standard or proprietary treatment systems that utilize surface irrigation disposal as detailed in Subchapter D of this chapter (relating to Planning, Construction, and Installation Standards for OSSF Systems).
- (E) all non-standard treatment systems that utilize surface irrigation disposal as detailed in Subchapter D of this chapter and cluster systems shall have planning materials submitted by a registered professional engineer only.
- (3) Review of non-standard planning materials. The executive director shall review initial plans for all non-standard planning material, as described in Subchapter D of this chapter (relating to Planning Construction and Installation Standards for OSSFs). Any subsequent similar non-standard planning materials may be reviewed by the local authorized agent once the original concept and planning materials has received favorable review by the executive director.

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§285.6. Cluster Systems.

Use of a cluster system shall be considered when lot sizes, lot location, or soil conditions make a standard system unacceptable.

- (1) Design. These systems shall be designed and constructed in accordance with the requirements of this chapter or Chapter 317 of this title (relating to Design Criteria for Sewerage Systems). These systems shall be designed and submitted to the permitting authority for review under seal of a registered professional engineer.
- (2) Permits required. Each single family dwelling on a cluster system must be individually permitted by the permitting authority.
- (3) Maintenance/Ownership agreement. Each permittee on a cluster system must be a party to a legally binding agreement regarding ownership, service, and maintenance of the cluster system. The minimum required elements of that agreement are as follows:
 - (A) The agreement must be legally binding to all parties;
- (B) Each person who uses the system for treatment and/or disposal must be a party to the agreement;

- (C) Each permittee must be a joint owner of the cluster system and the property on which the cluster system is located or the property on which the cluster system is located is owned in fee simple by one or more of the permittees to the cluster system and the owner/owners has granted a perpetual easement of access and use to all other permittees using the system.
- (D) The agreement must provide a reliable management structure for performing service, maintenance, and inspection of the system;
- (E) The agreement must include a reliable plan for handling apportionment and collection of cost among the parties; and
- (F) The agreement must denote that all parties are individually and severally responsible for the proper maintenance and functioning of the system.
- (4) Property ownership. The parties to the agreement must obtain all necessary rights of way, easements, or ownership of properties necessary for operation of the cluster system. The site for a cluster system shall be owned by all of the parties to the maintenance/ownership agreement or owned in fee simple by one or more of the permittees to the cluster system and having granted a perpetual easement of access and use to all other permittees using the system. The application for a cluster system shall include a certified copy of an affidavit, which has been duly recorded with the county/city clerk's office and added to the real property deed where the cluster system is located and the real property deed of each permittee. The affidavit shall state that the property shall not be transferred to a new owner without the new owner being advised that the property is part of a cluster system and shall be party to the agreement.

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§285.7. Additional Application Requirements for Surface Irrigation Systems.

- (a) Technical report. Each application for an OSSF permit utilizing surface irrigation as a disposal method shall be accompanied by a report outlining the planning and operation of the entire wastewater treatment and disposal system. A basis of planning, construction drawings, calculations, and system flow diagram shall be included in this report. Proprietary aerobic systems may reference the agency's approval number instead of furnishing construction drawings for the unit. All other information except construction drawings will be required for proprietary submittal.
- (b) Site drawing. A scale drawing and legal description of all land which is to be a part of the surface irrigation system will be included in the submittal of an application for a permit. At a minimum, the drawing will show the location of all existing and proposed buildings, wastewater disposal area, buffer zones, water wells, and any other pertinent features or information.
- (c) Landscape plan. The application for a permit shall be accompanied by a landscape plan, which will describe, in detail, the type of vegetation to be maintained on the irrigated area during any calendar year. Installations may irrigate existing vegetation provided all areas of bare ground are seeded or covered with sod, capable of growth, prior to system start up.

- (d) Maintenance requirements. Final permit approval will be issued after planning materials approval, provided the applicant furnishes a valid maintenance contract with a maintenance company. The maintenance company will verify that the surface irrigation system is operating properly and that they will provide on-going maintenance of the installation. The initial maintenance contract must be valid for a minimum of two years.
- (e) Maintenance contract. A maintenance contract will authorize the maintenance company to maintain and repair the system as needed. A copy of the signed maintenance contract between the property owner and the approved maintenance company shall be provided to the permitting authority prior to final permit approval.
 - (f) On-going maintenance. On-going maintenance shall be provided by a maintenance company.
- (1) The owner of each surface application system shall continuously maintain a signed written contract with a valid maintenance company and shall submit a copy of the contract to the permitting authority at least 30 days prior to expiration of the previous contract.
- (2) If the property owner or maintenance company desires to discontinue the provisions of the maintenance contract, the maintenance company shall notify, in writing, the permitting authority at least 30 days prior to the date service will cease.
- (3) If a maintenance company discontinues business, the property owner shall within 30 days of the termination date, contract with another approved maintenance company and provide the permitting authority with a copy of the newly signed maintenance contract.
- (g) Affidavit. Prior to issuance of a permit, a certified copy of an affidavit, which has been duly recorded at the county/city clerk's office and filed in reference to the real property deed on which the surface application system is to be installed, must be submitted. Such an affidavit, for example see §285.90(2) of this title (relating to Figures), shall state that the property shall not be transferred to a new owner without:
- (1) the new owner being advised that the property contains a surface application system for wastewater disposal;
- (2) the permit issued to the previous owner of the property being transferred to the new owner in accordance with §285.20(5) of this title (relating to Application Requirements General); and
- (3) the new owner submitting a valid signed maintenance contract to the permitting authority.
- (h) Testing and reporting. The maintenance company shall inspect each permitted surface irrigation system as directed by the testing and reporting schedule shown in §285.91(4) of this title (relating to Tables). The maintenance company shall report any responses to homeowner complaints and the results of its maintenance findings to the permitting authority within ten days of the specified reporting frequency. The number of site visits may be reduced to two per year for all systems having electronic monitoring and automatic telephone or radio access which will notify the maintenance company of system or component failure. This monitoring system shall also monitor effluent disinfection.

(i) Effluent disinfection. Treated effluent must be disinfected prior to surface application. Approved disinfection methods shall include but not be limited to chlorination, ozonation, or ultraviolet radiation. Tablets or other dry chlorinators shall use calcium hypochlorite of a type properly encapsulated and suitable for wastewater disinfection. The efficiency of the disinfection procedure will be established by monitoring the fecal coliform count or total chlorine residual from representative effluent grab samples as directed in the testing and reporting schedule. The frequency of testing and type of tests required are shown in §285.91(4) of this title.

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